

Amendments to the Claims:

Please amend the claims to read as follows:

- 1 1. (currently amended) A method for managing a service across an  
2 optical network over a dedicated circuit between a first and second  
3 service termination points, the method comprising:  
4 generating a service performance report message at each of the  
5 service termination points, each service performance report message  
6 having service-specific information related to a performance of the service  
7 as determined by the service termination point generating that service  
8 performance report message; and  
9 transmitting the service performance report message generated by  
10 one of the service termination points to the other service termination  
11 point over a service management channel to enable an assessment of the  
12 performance of the service based on the service performance report  
13 messages from both service termination points.
- 1 2. (original) The method of claim 1, further comprising monitoring the  
2 service management channel from an intermediate network element that  
3 is in the dedicated circuit between the service termination points to  
4 determine a status of the service.

1 3. (original) The method of claim 1, further comprising determining from  
2 the performance assessment whether the service is performing in  
3 accordance with terms of a service level agreement governing the service.

1 4. (original) The method of claim 1, wherein the step of generating a PRM  
2 is a scheduled event.

1 5. (original) The method of claim 1, further comprising monitoring the  
2 PRMs generated by the termination points at an intermediate network  
3 element connected to the dedicated circuit between the termination  
4 points.

1 6. (currently amended) The method of claim ~~1~~ 6, further comprising  
2 transmitting a service query command to each of the service termination  
3 points over the service management channel.

1 7. (original) The method of claim 1, further comprising receiving a service  
2 report having service configuration information over the service  
3 management channel from each of the service termination points in  
4 response to the service query commands.

1 8. (original) The method of claim 1, further comprising transmitting a  
2 command message over the service management channel to one of the

3 service termination points to change a state of that service termination  
4 point.

1 9. (original) The method of claim 8, wherein the state of the service  
2 termination point is a loopback condition, and further comprising  
3 transmitting a test signal to that one service termination point to verify  
4 connectivity.

1 10. (currently amended) An optical network for supporting a service  
2 provided by a service provider over a dedicated circuit between service  
3 termination points, the optical network comprising first and second  
4 network elements each disposed in the dedicated circuit of the service,  
5 the first network element sending a message to the second network  
6 element over an optical transport facility using a service management  
7 channel capable of carrying the message across a network-to-network  
8 interface, the message[s] conveying service-specific information related to  
9 a performance of the service over the dedicated circuit.

1 11. (original) The optical network of claim 10, wherein the service  
2 management channel includes a byte of a path overhead of an optical  
3 transmission frame.

1    12.    (original)    The optical network of claim 10, wherein the service  
2           management channel includes a field in a Generic Framing Procedure  
3           client management frame.

1    13.    (original)    The optical network of claim 10, wherein the message is one  
2           of a command message, a response to a command message, a service  
3           performance report message, and a priority code message.

1    14.    (original)    The optical network of claim 10, wherein the first and second  
2           network elements are edge service switches.

1    15.    (original)    The optical network of claim 10, wherein one of the first and  
2           second network elements is a core service switch.

1    16.    (original)    The optical network of claim 10, wherein the service is one of  
2           an asynchronous service, a synchronous service, a local area network  
3           service, a storage area network service, and a managed wavelength  
4           service.

1    17.    (currently amended)    The optical network of claim 10, wherein the  
2           first network element is in a first network managed by a first service  
3           provider and the second network element is in a second network  
4           managed by a second service provider.

1 18. (original) The optical network of claim 10, wherein the first and second  
2 network elements are in a network managed by the service provider.

1 19. (currently amended) A network element connected at one end of a  
2 dedicated circuit used to carry customer traffic associated with a service,  
3 the network element comprising:

4 a client interface receiving client signals from a client network;

5 a service management channel entity deriving from the client  
6 signals service-specific information to a performance of the service and  
7 generating a message in response to the service performance  
8 information; and

9 a transport interface for mapping and adapting the client signals to  
10 an optical transport facility, the transport interface transmitting the  
11 message to a network element at the other end of the dedicated service  
12 over a service management channel capable of carrying the message  
13 across a network-to-network interface.

1    20.    (currently amended)    A network element connected between service  
2           termination points located at opposite ends of a dedicated circuit used to  
3           carry customer traffic associated with a service over a transport facility,  
4           the network element comprising:

5                    a transport interface receiving customer traffic associated with the  
6           service; and

7                    a service management channel entity processing the customer  
8           traffic received by the transport interface to access service-specific  
9           performance information stored in a service management channel of the  
10          transport facility by one of the service termination points.